

Appl. No.: 09/915,997
Amdt. dated 10/13/2004
Reply to Office action of July 13, 2004

Amendments to the Claims:

1 - 42. (Cancelled)

43. (Previously Presented) A bone graft substitute composition, comprising:
100 parts by weight of calcium sulfate hemihydrate;
about 1 to about 10 parts by weight of a plasticizing substance; and
an aqueous mixing solution, wherein the composition is provided in a form suitable for use as a
bone graft substitute.

44. (Previously Presented) The composition of Claim 43, wherein the plasticizing substance
comprises a cellulose derivative.

45. (Previously Presented) The composition of Claim 43, wherein the plasticizing substance
is selected from the group consisting of sodium carboxymethylcellulose, methylcellulose,
hydroxypropyl methyl cellulose, hydroxypropyl cellulose, ethylcellulose, hydroxyethylcellulose,
and cellulose acetate butyrate.

46. (Previously Presented) The composition of Claim 43, wherein the plasticizing substance
comprises hydroxypropyl methyl cellulose.

47. (Previously Presented) The composition of Claim 43, wherein the plasticizing substance
comprises hydroxypropyl cellulose.

48. (Previously Presented) The composition of Claim 43, wherein the plasticizing substance
comprises hyaluronic acid.

49. (Previously Presented) The composition of Claim 43, wherein the plasticizing substance
comprises methycellulose.

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50. (Previously Presented) The composition of Claim 43, wherein the aqueous mixing solution comprises sterile water.

51. (Previously Presented) The composition of Claim 43, wherein the aqueous mixing solution comprises an inorganic salt.

52. (Previously Presented) The composition of Claim 43, wherein the aqueous mixing solution comprises a cationic surface active agent.

53. (Previously Presented) The composition of Claim 52, wherein the cationic surface active agent is selected from the group consisting of sodium chloride, phosphate buffered saline, potassium chloride, sodium sulfate, ammonium sulfate, ammonium acetate, and sodium acetate.

54. (Previously Presented) The composition of Claim 43, comprising about 1 to about 7 parts by weight of the plasticizing substance.

55. (Previously Presented) The composition of Claim 43, comprising about 2 to about 6 parts by weight of the plasticizing substance.

56. (Previously Presented) The composition of Claim 43, comprising about 20 to about 40 parts by weight of the aqueous mixing solution.

57. (Previously Presented) The composition of Claim 43, comprising about 20 to about 35 parts by weight of the aqueous mixing solution.

58. (Previously Presented) The composition of Claim 43, wherein the composition is provided in a form suitable for insertion in an injection apparatus and ejection through a 1/8 inch diameter orifice into a surgical site.

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59. (Previously Presented) The composition of Claim 43, wherein the composition is capable of being handled and shaped into a form suitable for positioning in a surgical site.

60. (Previously Presented) The composition of Claim 43, consisting essentially of 100 parts by weight of calcium sulfate hemihydrate, about 1 to about 10 parts by weight of a plasticizing substance, and
an aqueous mixing solution.

61. (Cancelled)

62. (Previously Presented) A bone graft substitute composition, comprising:
100 parts by weight of medical grade calcium sulfate hemihydrate;
about 1 to about 10 parts by weight of a plasticizing substance, wherein the plasticizing substance is selected from the group consisting of sodium carboxymethylcellulose, methylcellulose, hydroxypropyl methyl cellulose, hydroxypropyl cellulose, ethylcellulose, hydroxyethylcellulose, and cellulose acetate butyrate; and
about 20 to about 65 parts by weight of an aqueous mixing solution, wherein the composition is provided in a form suitable for use as a bone graft substitute and capable of being handled and shaped into a form suitable for positioning in a surgical site.

63. (Previously Presented) The composition of Claim 62, comprising about 1 to about 7 parts by weight of the plasticizing substance.

64. (Previously Presented) The composition of Claim 62, comprising about 2 to about 6 parts by weight of the plasticizing substance.

65. (Previously Presented) The composition of Claim 62, comprising about 20 to about 40 parts by weight of the aqueous mixing solution.

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66. (Previously Presented) The composition of Claim 62, comprising about 20 to about 35 parts by weight of the aqueous mixing solution.

67. (Previously Presented) The composition of Claim 62, wherein the aqueous mixing solution comprises sterile water.

68. (Previously Presented) A bone graft substitute composition, comprising:
100 parts by weight of calcium sulfate hemihydrate;
about 1 to about 10 parts by weight of a plasticizing substance, wherein the plasticizing substance comprises a cellulose derivative or hyaluronic acid; and
about 20 to about 65 parts by weight of an aqueous mixing solution, wherein the composition is provided in a shape suitable for insertion into a surgical site or loaded into an injection apparatus suitable for ejecting the composition into a surgical site.

69 – 71. (Cancelled)